

***Urytalpa chandleri* sp. n. (Diptera: Keroplatidae) from Turkey, with a key to the Western Palaearctic species of the genus**

DIMITAR BECHEV¹ & HASAN KOÇ²

¹Department of Zoology, University of Plovdiv, Tzar Assen 24, BG-4000 Plovdiv, Bulgaria

²Department of Biology, Science and Arts Faculty, Muğla University, 48170 Kötekli, Muğla, Turkey

Abstract

Urytalpa chandleri sp. n. from southwest Asiatic Turkey is described and illustrated. *Platyura maritima* Becker is transferred to *Urytalpa* based on examination of the type specimen. A key to the Western Palaearctic species of *Urytalpa* is provided.

Key words: Keroplatidae, *Urytalpa*, Western Palaearctic, taxonomy, Turkey

Introduction

Urytalpa was described by Edwards (1929) as a subgenus of *Platyura* Meigen with the type species *Platyura ochracea* Meigen, 1818. Matile (1977) considered it as genus and this view is accepted in the modern system of Keroplatidae: Orfeliini (Evenhuis 2006). *Urytalpa* differs from other genera of Orfeliini by the following characters: mouthparts shorter than head; R4 ending in C; base of M absent; empodium absent; laterotergite bare; branches of M and CuA setose above; prothoracic spiracle without hairs; fine tibial setae irregularly arranged; A1 reaching wing margin.

The genus is known from only six species in the Western Palaearctic, five in the Eastern Palaearctic and one in Uttar Pradesh, Northern India (Bechev 2000; Uesugi 2004; Evenhuis 2006). Our objectives are to provide a key to the Western Palaearctic species of the genus, describe a new species from southwest Asiatic Turkey, transfer *Platyura maritima* Becker to *Urytalpa*, and augment the description of *Urytalpa nussbaumi* Chandler.

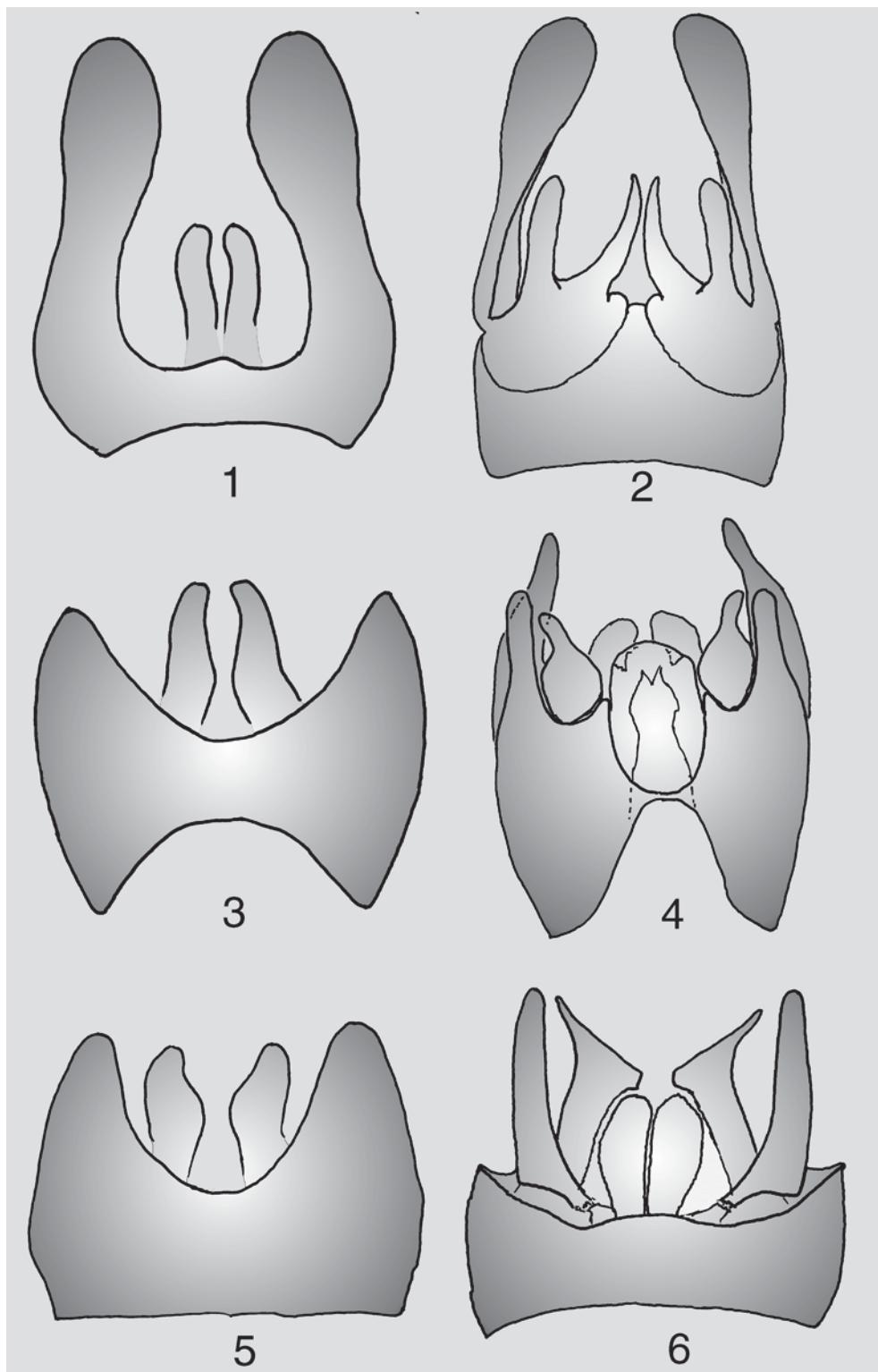
Material and methods

The material of the new species was collected using an aerial net, is preserved in alcohol and is deposited in the collection of University of Plovdiv. The male terminalia were studied in glycerol after maceration in warm potassium hydroxide (10% KOH).

Figures 1 to 12 are redrawn from literature as follows: Figs. 1, 3 and 7 from Edwards (1913); Figs. 9 and 10 from Lundström (1914); Figs. 2, 4 and 8 from Hutson *et al.* (1980); Figs. 11 and 12 from Chandler (1994); Figs. 5 and 6 from Chandler (1995). Setae are not shown.

Morphological terminology follows Søli *et al.* (2000).

Distribution of the Western Palaearctic species of the genus (Fig. 21) follows the information provided by the Fauna Europaea (Chandler, 2004).



FIGURES 1–6. Male terminalia: 1. *Urytalpa macrocera*—dorsal view. 2. *U. macrocera*—ventral view. 3. *U. atriceps*—dorsal view. 4. *U. atriceps*—ventral view. 5. *U. rhapsodica*—dorsal view. 6. *U. rhapsodica*—ventral view.

Key to males of the Western Palaearctic species of *Urytalpa*

1. Antenna nearly twice as long as head and thorax together. Fore metatarsus as long as tibia. Male terminalia—Figs. 1 and 2..... *U. macrocera* Edwards

- Antenna not longer than head and thorax together. Fore metatarsus distinctly shorter than tibia 2
- 2. Costa extending $\frac{1}{3}$ – $\frac{1}{2}$ of distance from tip of R5 to that of M1. Male terminalia—Figs. 3 and 4 *U. atriceps* Edwards
- Costa extending about $\frac{1}{4}$ or less of distance from tip of R5 to M1 3
- 3. Abdomen black *U. maritima* Becker
- Abdomen with yellow or yellow-brown markings or bands 4
- 4. Distal margin of tergite 9 in great part convex, only medially with small emargination (Fig. 16). Male terminalia—Figs. 16 – 19 *U. chandleri* sp. n.
- Distal margin of tergite 9 for the greater part emarginate 5
- 5. Distal margin of tergite 9 with U-shaped emargination (Fig. 5). Male terminalia—Figs. 5 and 6 *U. rhapsodica* Chandler
- Distal margin of tergite 9 with trapezium-shaped emargination 6
- 6. Gonostyle not prolonged more than gonocoxite (Fig. 8). Male terminalia—Figs. 7 and 8 *U. ochracea* Meigen
- Gonostyle prolonged more than gonocoxite (Figs. 10, 12) 7
- 7. Distal margin of tergite 9 convex, only medially with trapezium-shaped emargination (Fig. 9). Apex of gonostyle inwardly directed (Fig. 10) *U. trivittata* Lundström
- Distal margin of tergite 9 not convex, all with large trapezium-shaped emargination. (Fig. 11). Gonostyle outwardly directed (Fig. 12) *U. nussbaumi* Chandler

***Urytalpa chandleri* sp. n.**

(Figs. 13–19)

Diagnosis. *U. chandleri* differs from other species of the genus in having a very characteristic hoe-shaped appendage of gonostyle (Fig. 17) and in convex distal margin of tergite 9 (Fig. 16) with small medial emargination.

Holotype male: Turkey, Aydın, Koçarlı, Tekeli Village (37°46' N / 27°38' E), 25 m a.s.l, 09.04.2005, leg. H. Koç (in University of Plovdiv).

Head (Fig. 13). Dark brown. Clypeus and mouthparts yellowish. Antenna about as long as head and thorax together, brownish yellow, only basal third of first flagellomere yellow. Flagellomeres 2 and 3 about 1,5 longer as broad. Terminal flagellomere with apical papilla.

Thorax. Scutum dark brown, paler laterally. Pleura and mediotergite brown, scutellum brown yellowish. Mesoscutal setae arranged in irregular rows of acrostichals and dorsocentrals and in rows of strong lateral setae. Antepronotum and proepisternum with setae. Anepisternum with small setae on upper part. Preepisternum, anepimeron, laterotergite and mediotergite bare. Anterior spiracle without bristles.

Legs. Yellow, tarsi brownish. Fore metatarsus shorter than fore tibia (about 0,7:1). Claws of the fore legs with two small spines below (visible at 150x). Mid and hind legs have one spine and possibly a second smaller one apparent.

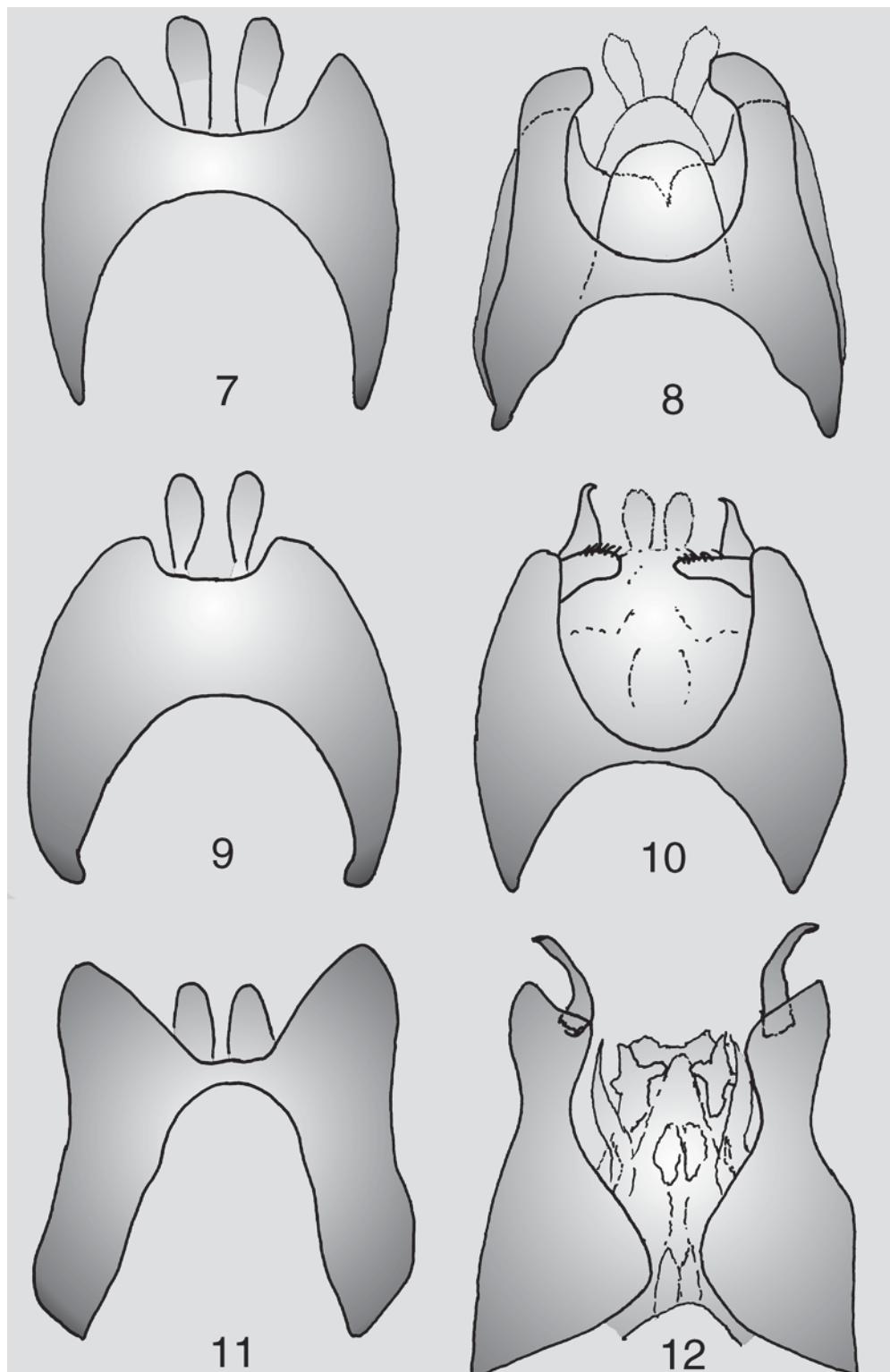
Wing (Fig. 15). Yellowish, length 5 mm. Veins dark brown. C extending beyond tip of R5. Sc ending in C almost on the level of the base of Rs.

Abdomen. Brownish yellow. Tergite 1 brownish, T2–T4 brownish yellow, with yellow posterior part; T5–T6 brownish yellow, with yellow posterior margin; T7–T8 brownish yellow.

Male terminalia —Figs. 16–19.

Female. Unknown.

Etymology. The species is named in honour of Peter J. Chandler.



FIGURES 7–12. Male terminalia: **7.** *Urytalpa ochracea* - dorsal view. **8.** *U. ochracea* - ventral view. **9.** *U. trivittata* - dorsal view. **10.** *U. trivittata* - ventral view. **11.** *U. nussbaumi* - dorsal view. **12.** *U. nussbaumi* - ventral view.

***Urytalpa maritima* (Becker, 1907) comb. n.**

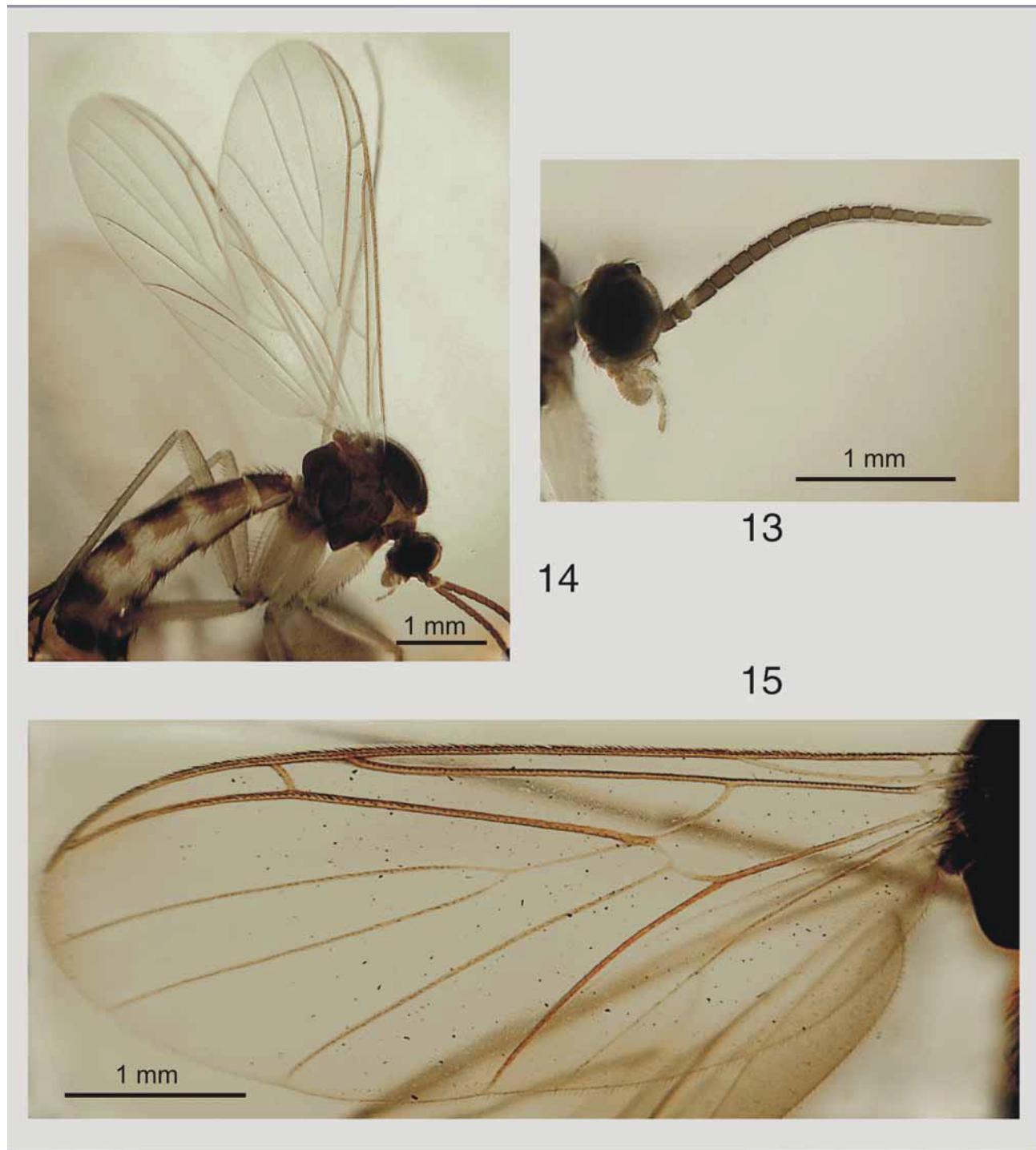
Platyura maritima Becker, 1907: 233.
(Fig. 20)

Material examined. Holotype: labelled "Tabarka, Holotype" (Zoologisches Museum der Humboldt Universität, Berlin). The type specimen is in poor condition, without abdomen.

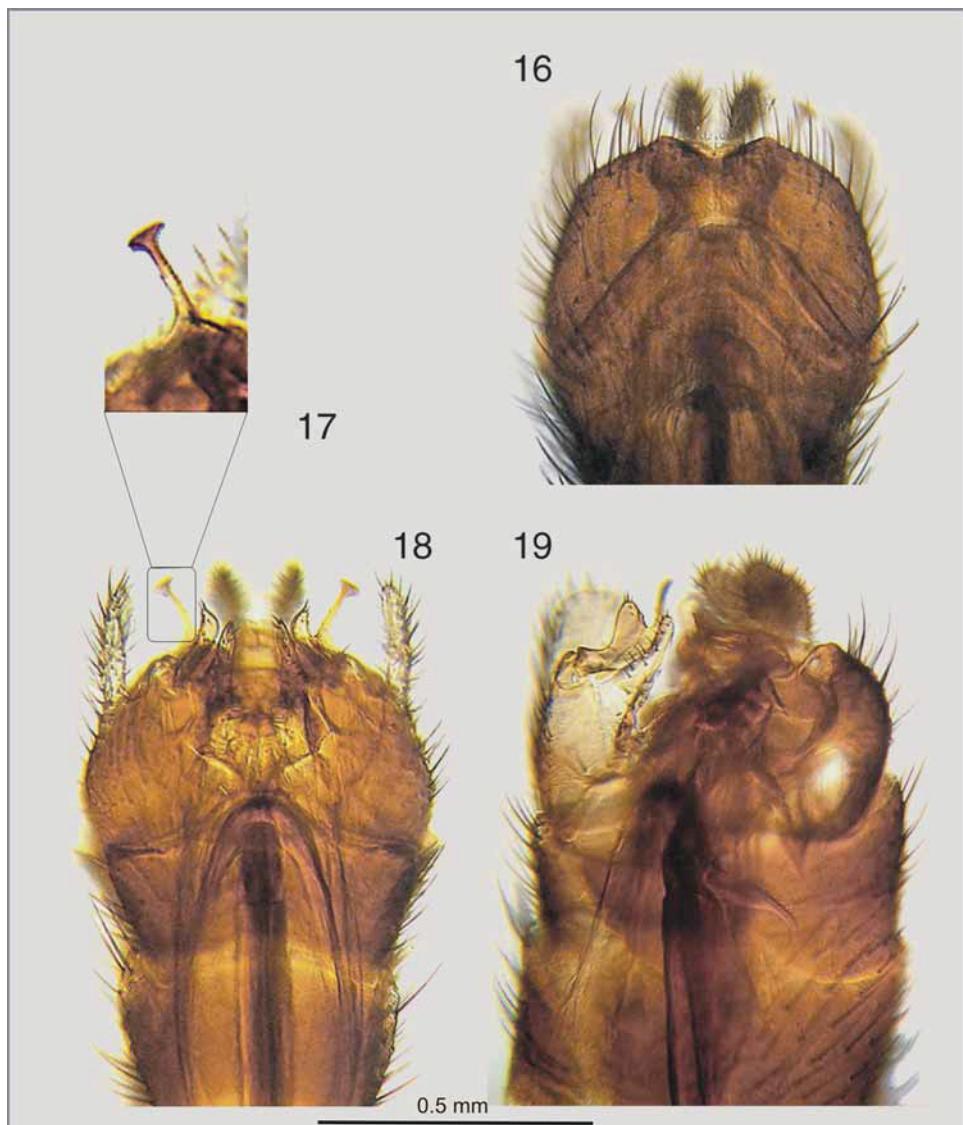
Locus typicus: Tunisia: Tabarka.

Head. Black brown. Mouthparts yellowish. Flagellomeres dark, apical absent. Pedicel yellow about distal margin.

Thorax. Mesoscutum black. Pleura and mediotergite black brown. Mesoscutal setae arranged in irregular rows of acrostichals and dorsocentrals and in a rows of lateral setae. Scutellum with setae on periphery. Antepronotum and anepisternum with setae. Preepisternum, anepimeron, laterotergite and mediotergite bare. Anterior spiracle without bristles.



FIGURES 13–15. *Urytalpa chandleri* sp. n.: 13. Head. 14. Habitus. 15. Wing.



FIGURES 16–19. *Urytalpa chandleri* sp. n.—male genitalia: **16.** Dorsal view. **17.** Appendage of gonostyle - ventral view. **18.** Ventral view. **19.** Lateral view

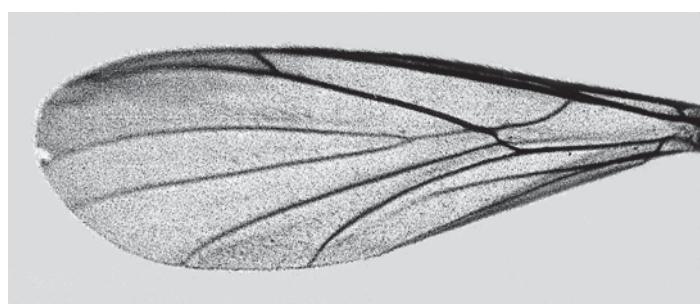


FIGURE 20. *Urytalpa maritima* - wing.

Legs. Yellowish, tarsi brownish. Fine tibial setae irregular. Empodium absent. Claws of the legs with small spines below (visible by 150x). Fore metatarsus distinctly shorter than tibia.

Wing (Fig. 20). Costa extending beyond tip of R5. R4 ending in C. Base of M absent. A1 almost reaching wing margin. Branches of M and Cu with small macrotrichia.

Abdomen. Black (according to the original description).

Discussion. The species is transferred to *Urytalpa* on the base of the generic characters given in the Introduction.

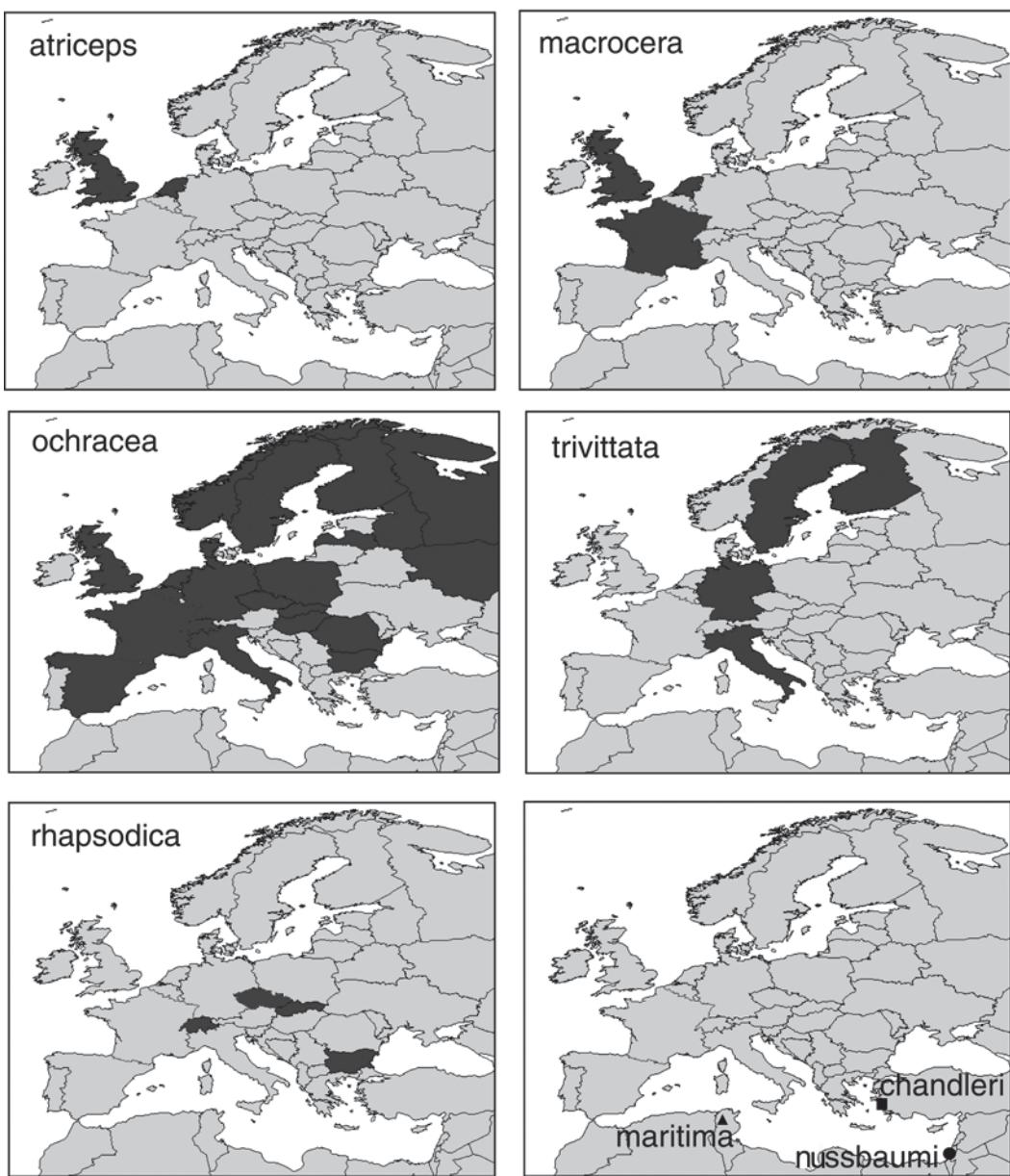


FIGURE 21. Distribution of the Western Palaearctic species of *Urytalpa*.

Urytalpa nussbaumi Chandler, 1994

Data for the length of the fore tibia and metatarsus are not given in the original description.

New measurement. Fore metatarsus shorter than fore tibia; ratio about 0,8:1 (measured by N. Wyatt in Natural History Museum, London).

Material examined. Paratype, male: labelled "Israel, Haifa, 12.III.1924, O. Theodor" (Natural History Museum, London).

Conclusions

The existing data for *Urytalpa* shows a disjunct distribution in the Palaearctic with two centers: in the Western Palaearctic (eight species) and in the Eastern Palaearctic (five species). Until now the genus was not known from Siberia. In the Western Palaearctic five species are distributed in Europe and three in the Mediterranean Region (Fig. 21). *Urytalpa vicina* (Brunetti, 1912) from Uttar Pradesh, India was described from only two females and its systematic position is in need of revision.

Acknowledgements

We thank Dr. H. Schumann (Zoologisches Museum der Humboldt Universität, Berlin) for loan of the holotype of *Platyuta maritima*, Nigel Wyatt (Natural History Museum, London) for the measurement of fore tibia and metatarsus of *Urytalpa nussbaumi* and Dr. J. Ziegler (Zoologisches Museum der Humboldt Universität, Berlin) for the measurement of fore tibia and metatarsus of *Platyura maritima*. Two anonymous reviewers are acknowledged for their valuable comments and suggestions.

We also thank the authorities of TÜBİTAK (Research Project No 2245) and FSI—University of Plovdiv (Project 07-B-9) for financial support.

References

Bechev, D. (2000) World distribution of the genera of fungus gnats (Diptera: Sciaroidea, excluding Sciaridae). *Studia Dipterologica*, 7, 543–552.

Becker, T. (1907) Die Ergebnisse meiner dipterologischen Frühjahrsreise nach Algir und Tunis, 1906. *Zeitschrift für Systematische Hymenopterologie und Dipterologie*, 7, 225–256.

Chandler, P. (1994) The fungus gnats of Israel (Diptera: Sciaroidea, excluding Sciaridae). *Israel Journal of Entomology*, 28, 1–100.

Chandler, P. (1995) New data on fungus gnats (Diptera, Sciaroidea excluding Sciaridae) of Czechoslovakia. *Annotationes Zoologicae et Botanicae*, 217, 3–16.

Chandler, P. (2004) Fauna Europaea: Mycetophilidae. In: de Jong, H. (Ed.), *Fauna Europaea: Diptera: Nematocera. Fauna Europaea* version 1.3. Available from: <http://www.faunaeur.org>. (accessed 08 August 2007).

Edwards, F. W. (1913) Notes on British Mycetophilidae. XII. *Transactions of the Entomological Society of London*, 334–382, pl. XII–XVIII.

Evenhuis, N. (2006) Catalogue of the Keroplatidae of the World (Insecta: Diptera). *Bishop Museum Bulletins in Entomology* 13. Bishop Museum Press, Honolulu, 1–178.

Hutson, A., Ackland, D. & Kidd, L. (1980) Mycetophilidae (Bolitophilinae, Ditomyiinae, Diadocidiinae, Keroplatinae, Sciophilinae and Manotinae) (Diptera, Nematocera). *Handbooks for Identification of the British Insects*. Royal Entomological Society of London, 9, 3, 111 pp.

Lundström, C. (1914) Bieträge zur Kenntnis der Dipteren Finlands. IX. Supplement 3. Mycetophilidae. *Acta Societatis pro Fauna et Flora Fennica*, 39, 1–27.

Matile, L. (1977) Catalogue provisoire des Diptères Mycetophilidae de la Faune de France. *Bulletin du Museum National d'Historie Naturelle, Zoologie* 319, 621–655.

Søli, G.E., Vockeroth, J.R. & Matile, L (2000) Families of Sciaroidea. In: Papp, L. & Darvas, B. (Eds.), *Contributions to a Manual of Palaearctic Diptera (with Special Reference to Flies of Economic Importance)*. Appendix. Science Herald, Budapest, 49–92.

Uesugi, K. (2004) Fungus gnats of the genus *Urytalpa* Edwards (Diptera: Keroplatidae) in Japan. *Entomological Science*, 7, 369–376.